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| APPLICATION NO.                  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 09/841,189                       | 04/25/2001  | Govind Malalur       | 108339-00000        | 3654             |
| 32294                            | 7590        | 02/16/2005           | EXAMINER            |                  |
| SQUIRE, SANDERS & DEMPSEY L.L.P. |             |                      | NGUYEN, BRIAN D     |                  |
| 14TH FLOOR                       |             |                      | ART UNIT            |                  |
| 8000 TOWERS CRESCENT             |             |                      | PAPER NUMBER        |                  |
| TYSONS CORNER, VA 22182          |             |                      | 2661                |                  |

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/841,189

**Applicant(s)**

MALALUR ET AL.

**Examiner**

Brian D Nguyen

**Art Unit**

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 10/18/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/18/04 & 4/25/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-9, 14-22, and 27-32 are rejected under 35 U.S.C. 102(a) as being anticipated by LEVEL ONE (Level One™ IXP1200 Network Processor).

Regarding claim 1, Level One discloses a network switch comprising a first and a second data port interfaces, a CPU interface, a common memory, a memory management unit (see figure 1 on page 5), and at least two set of communication channels for communicating data and messaging information wherein one set of communication channels provides communication from the first and second interfaces to the memory management unit and another set provides communication from the memory management unit to the first and second interfaces (see figure where bi-directional communication between elements of the switch is shown, the communication includes data and messaging information).

Regarding claims 2 and 3, Level One discloses three communication channels including a first channel for communicating data, a second channel for controlling the transmission of data on the first channel, and a third channel for controlling other activity in the switch (see pages 45-50 where different channels are shown).

Regarding claim 4, Level One discloses a gigabit data port interface (see figure 1).

Regarding claim 5, Level One discloses ASIC chip (see first paragraph on page 1).

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Regarding claims 6 and 7, Level One discloses the switch is configured to perform layer two/three switching at wirespeed (see processor description on page 5).

Regarding claims 8 and 9, Level One discloses a remote CPU (see CPU in figure 1).

Regarding claims 14-22, claim 14-22 are means plus function claims that have substantially the same limitations as the respective apparatus claims 1-9. Therefore, they are subject to the same rejection.

Regarding claims 27-32, claims 27-32 are method claims that have substantially the same limitations as the respective method claims 1-9. Therefore, they are subject to the same rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-11, 13, 23-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over LEVEL ONE (Level One™ IXP1200 Network Processor) in view of Hegde (6,570,875).

Regarding claims 10-11 and 13, Level One discloses different tables (see pages 1 and 2.4 on page 11). Level One does not specifically disclose VLAN table. However, a switch that supports VLAN with VLAN table is well known in the art. Hegde discloses VLAN table (see figure 3 and col. 6, lines 1-3). Therefore, it would have been obvious to a person of ordinary skill

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in the art at the time the invention was made to use the VLAN table as taught by Hegde in the system of Level One so that data packets can be routed between VLANs.

Regarding claims 23-24 and 26, claims 23-24 and 26 are means plus function claims that have substantially the same limitations as the respective apparatus claims 10-11 and 13.

Therefore, they are subject to the same rejection.

5. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over LEVEL ONE (Level One™ IXP1200 Network Processor) in view of Bray et al (6,483,849).

Regarding claim 12, Level One does not specifically disclose an auto-negotiating unit. However, this feature is well known in the art. Bray discloses an auto-negotiating unit (see figure 2). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the auto-negotiating unit as taught by Bray in the system of Level One so that different devices with different speed can communicate with the switch.

Regarding claim 25, claim 25 is a means plus function claim that has substantially the same limitations as the respective apparatus claim 12. Therefore, it is subject to the same rejection.

### ***Response to Arguments***

6. Applicant's arguments filed 10/18/04 have been fully considered but they are not persuasive.

The applicant argued that *looking to Figure 1 of LEVEL ONE and its associated description, it would appear that the "10/100/1Gb Ethernet MAC" and the "ATM, T1/E1, Other MAC"' could be equivalent to data port interfaces. However, both of those interface modules are*

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*illustrated as being serviced by a single "FIFO Bus 66 MHz," and does not illustrated two sets of channels. A review of the description of the FIFO bus make it clear that it does not teach or suggest the presence of at least two sets of channels being encompassed by that bus. Thus, Applicants respectfully assert that at least the element of "at least two sets of communication channels" in claims 1, 14 and 27 is neither taught nor suggested.* The examiner agrees that the "10/100/1Gb Ethernet MAC" and the "ATM, T1/E1, Other MAC" are equivalent to data port interfaces. However, the examiner disagrees that *both of those interface modules are illustrated as being serviced by a single "FIFO Bus 66 MHz," and does not illustrated two sets of channels* because 64 bits bus can comprise at least two sets of communication channels. For example, one set of channels for transmitting data from MAC-layer devices to the common memory (SDRAM) and another set of channels for receiving data from the common memory. The LEVEL ONE also teaches in page 10 that the IX bus can be configured as either a 64-bit bus or as two 32-bit buses (see paragraph 2-3 in page 10).

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

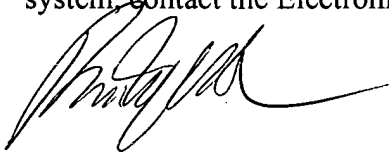
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



2/10/05

**BRIAN NGUYEN**  
**PRIMARY EXAMINER**